

INTRODUCTION

Welcome to the second portion of your Total Quality Management training. The purpose of this orientation training is to introduce you to AIR's approach to Total Quality Management. The workshop will build on and follow the one and one-half day Total Quality Management orientation course provided by the Office of Personnel Management (**OPM**).

At the end of this orientation, you will:

- Understand AIR's vision of **TQM** and the three quality practices in place to accomplish the vision (customer focused, continuous improvement, employee involvement),
- Identify the strengths and weaknesses of the overall organization in the three quality practices,
- Identify potential improvement projects,
- Understand AIR's plan for implementing **TQM**, and
- Identify actions you can personally take to initiate **TQM** back on the job.

LENGTH OF ORIENTATION TRAINING

The total time of the workshop is about **6.5** hours without breaks. The training plan is as follows:

Unit	Unit Title	Estimated Time
A	TQM Within AIR: An Overview	2 hours
B	Assessing Our Organization in Three Aircraft Certification Quality Practices	1 hour
c	Identifying Potential Improvement Projects	2 hours
D	AIR Plan for Implementing TQM	45 minutes
E	TQM and You - Getting Started	45 minutes

ABOUT THIS BOOK

Your orientation training book contains:

- An Introduction
- Copies of slides used during presentation and space for notes
- Activities
- Appendices.

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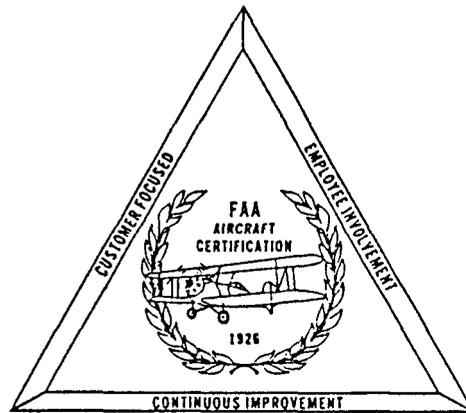
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UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-i

Total Quality Management Within The Aircraft Certification Service: An Overview

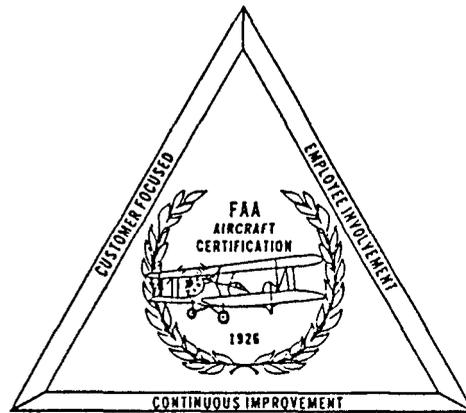


Notes

UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-i

Total Quality Management Within The Aircraft Certification Service: An Overview



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Slide A-3

AIR's Approach to TQM Training Objective

Overview AIR's initiatives for Establishing TQM Throughout the Organization, Identify Potential Projects for TQM, and Present a Plan for Implementing TQM.

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Slide A-3

AIR's Approach to TQM Training Objective

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UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-6

FAA's **TQM** Philosophy

- Mission Reflected in All We Do
- Employees Are Our Most Important Asset
- Listen to Associates and Subordinates
- Don't Be Afraid of Change
- Implement Improvements to Products and Procedures
- Provide Educational and Training Opportunities
- Encourage **TQM** Implementation by Our Suppliers
- Personally Lead and Reward Improvement

Notes

UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-6

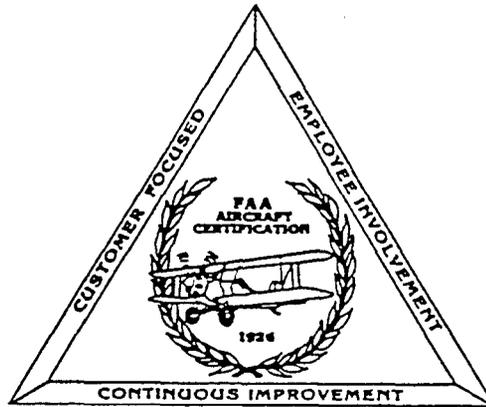
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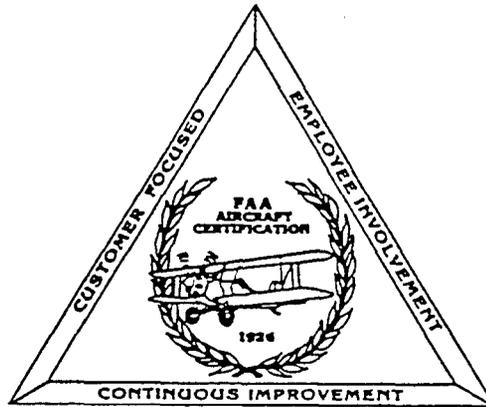
AIRCRAFT CERTIFICATION SERVICE TOTAL QUALITY MANAGEMENT



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UNIT A: TQM WITHIN AIR: AN OVERVIEW

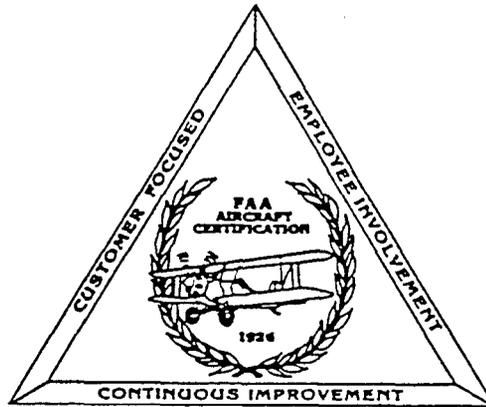
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UNIT A: TQM WITHIN AIR: AN OVERVIEW

CUSTOMER AND PRODUCT ANALYSIS

- THE TRAVELING PUBLIC IS OUR MOST IMPORTANT CUSTOMER, AND
- PUBLIC CONFIDENCE IN THE SAFETY OF THE INTERNATIONAL AIR TRANSPORTATION SYSTEM IS OUR MOST IMPORTANT PRODUCT !

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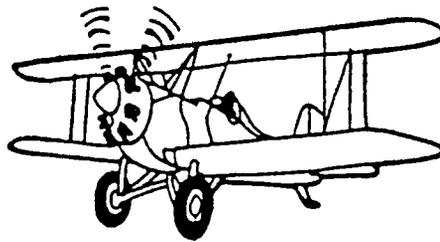
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UNIT A: TQM WITHIN AIR: AN OVERVIEW

THE FIRST AIRCRAFT CERTIFICATED

THE FIRST AIRCRAFT TO BE TYPE CERTIFICATED IN THE UNITED STATES WAS
THE-

BUHLER VERVILUX J-4 "Airstar,"



TYPE CERTIFICATED ON MARCH 19, 1927.

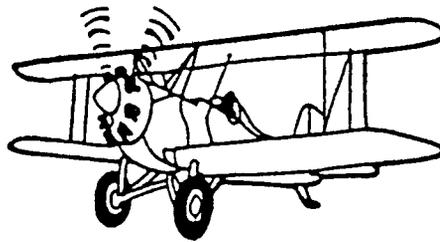
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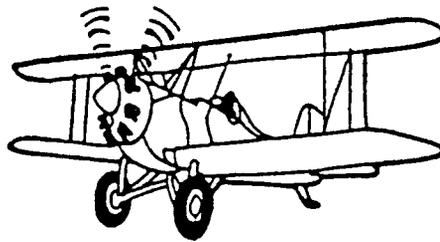
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ALTERNATIVES TO TOTAL QUALITY MANAGEMENT

- o TOTAL NONQUALITY MANAGEMENT?
- o PARTIAL QUALITY MANAGEMENT?
- o NO MANAGEMENT AT ALL?

~~THE PROJECTS ARE NEW. THE APPROACHES WILL BE DIFFERENT.~~

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UNIT A: TQM WITHIN AIR: AN OVERVIEW

KEY DEFINITIONS

(TQM)

QUALITY:	RESPONSIVENESS TO CUSTOMER NEEDS AND FREEDOM FROM DEFECT.
CUSTOMER:	ANYONE WHO IS IMPACTED BY OUR PROCESSES, PRODUCTS, OR SERVICES
	- EXTERNAL
	- INTERNAL
SUPPLIER:	ANYONE WHO MAKES AN INPUT TO OUR PROCESSES.
PRODUCE	AN OUTPUT OF OUR PROCESSES .
SERVICE	THE WAY WE INTERFACE WITH OUR CUSTOMERS IN PROVIDING OUR PRODUCTS
PROCESS	A SYSTEMATIC SERIES OF ACTIONS DIRECTED TOWARD THE COMPLETION OF A PRODUCT .

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Notes

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Aircraft Certification Service Vision

"Commitment to Public Confidence in Aviation Safety
Through Employee Involvement in the Continuous
Improvement of Our Products and Services."

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Slide A-I 1

Characteristics of Our **TQM** Culture

Continued

- Uses Teams
- Values Individual Initiative
- Identifies and Develops Future Managers
- Relies on Employee Involvement
- Holds a Central Focus on the Quality of Work Life
- Gives Priority to Training
- Considers **TQM** To Be a Never-Ending Process

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Slide A-I 1

Characteristics of Our **TQM** Culture

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UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-14

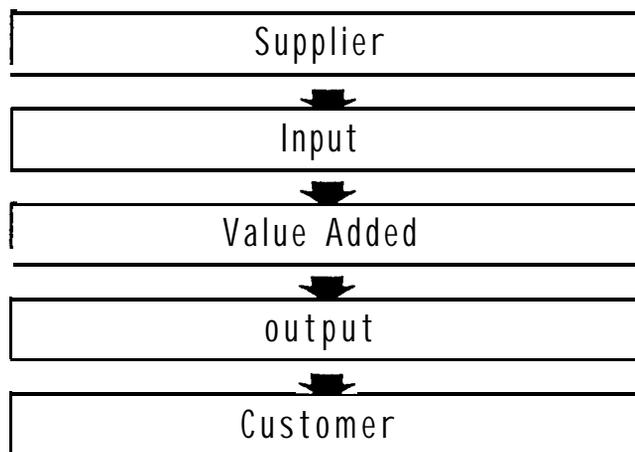
Customer Defined



Notes

Slide A-15

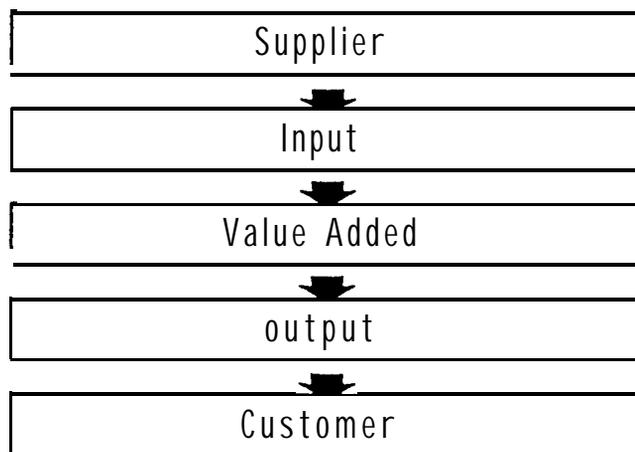
The Customer- Supplier Chain



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Slide A-15

The Customer- Supplier Chain



Notes

Slide A-17

**Aircraft Certification Service
Vital Internal Customers
(Within FAA)**

- FAA Top Management
- Aircraft Certification Service Employees
- Flight Standards Service
- Accident Investigation
- Aviation Security
- Aviation Medicine
- Research and Development
- International Aviation
- Air Traffic and Airway Facilities Organizations
- Airports
- Public Affairs
- Administrative Support Organizations

Notes

Slide A-17

**Aircraft Certification Service
Vital Internal Customers
(Within FAA)**

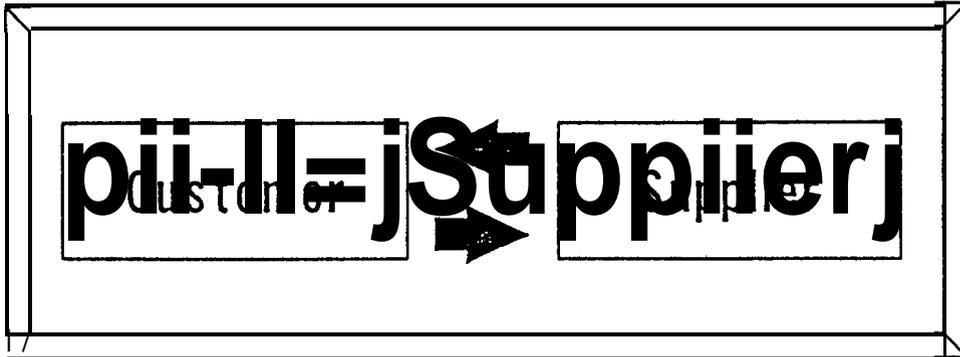
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Slide A-19

Working Together for a Better FAA

Internal Process Relationship



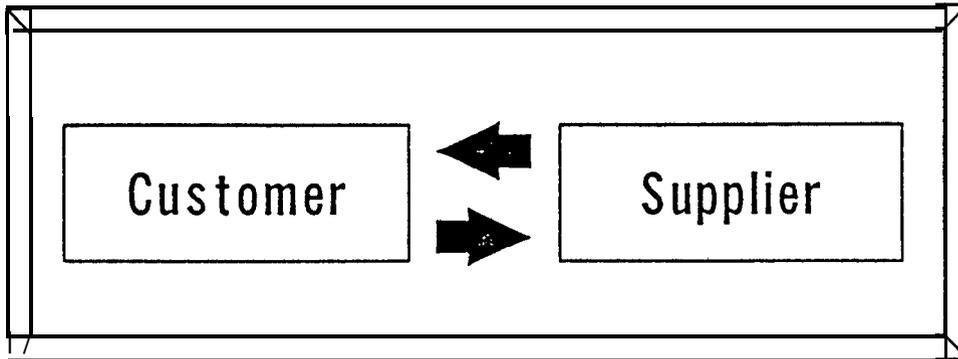
Our Success Depends on Each Other!

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Slide A-19

Working Together for a Better FAA

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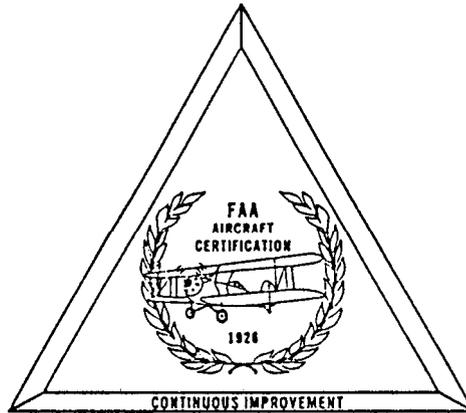
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UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-21

Continuous Improvement

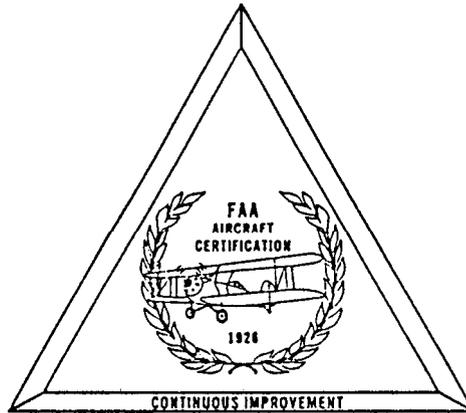


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UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-21

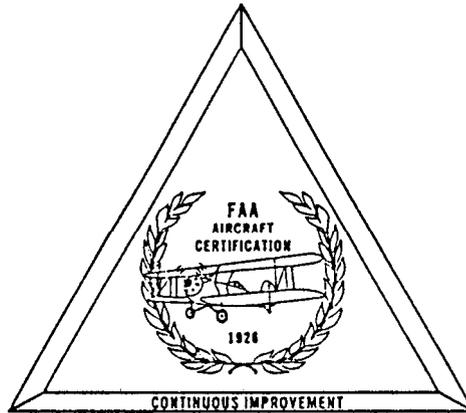
Continuous Improvement



Notes

Slide A-21

Continuous Improvement



Notes

Slide A-24

Solving Problems

- Fix It Right Away,
While It's Happening
- If You Can't Fix It,
Involve Others Who Can

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Slide A-24

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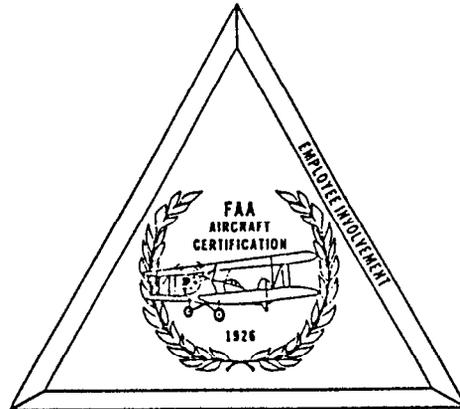
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UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-27

Employee Involvement

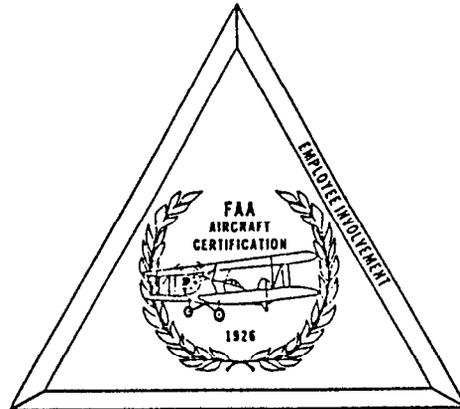


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UNIT A: TQM WITHIN AIR: AN OVERVIEW

Slide A-27

Employee Involvement



Notes

Slide A-29

What Employee Involvement Is Not

Employee Involvement Is Not:

- A One-Time/ Separate Event
- Management's Relinquishment of Authority and Responsibility
- Coddling/ Manipulating Employees

Notes

Slide A-29

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UNIT B: ASSESSING OUR ORGANIZATION IN THE THREE AIRCRAFT CERTIFICATION QUALITY PRACTICES

ACTIVITY B-I. ASSESSING OUR ORGANIZATION IN THE THREE QUALITY PRACTICES

Part 1. Instructions

For each of the three Aircraft Certification quality practices, give a ~~subjective~~ rating from 1 to 5 (1 = low, 5 = high) on how strongly you feel these practices are present in your organization. Your organization in this case means the work unit to which you are assigned (e.g., branch, office, division, etc.). Some reflection questions you might want to consider to help you with your ratings include:

Customer Focused

- Do we know what the needs of our customers are? Do we treat each other well internally? Is communication good?
- . Are our customers satisfied?
- . Do we know our customers' expectations?
- . Are we responsive when a customer is dissatisfied?

Continuous Improvement

- . Do we fix problems right away or do we ignore them?
- . Do we try to get to the cause of problems in an effort to prevent them from happening or do we try to patch things up and move on?
- . Do we work toward anticipating the future needs of our customers?
- . Do we take risks?

Employee Involvement

- . Do employees get involved in decisions that impact their work?
- . Are employees' suggestions taken seriously?
- . Do employees feel committed to their work?

Now, rate your organization in each of these areas . . .

	Low					High
1 A. Internal Customer Focused	1	2	3	4	5	
1B. External Customer Focused	1	2	3	4	5	
2. Continuous Improvement	1	2	3	4	5	
3. Employee Involvement	1	2	3	4	5	

UNIT B: ASSESSING OUR ORGANIZATION IN THE THREE AIRCRAFT CERTIFICATION QUALITY PRACTICES

ACTIVITY B-I. ASSESSING OUR ORGANIZATION IN THE THREE QUALITY PRACTICES

Part 2. Instructions

Now that you've rated your organization in terms of the three Aircraft Certification quality practices, examine the strengths and weaknesses of your organization that may have influenced your ratings. In the spaces below, identify some strengths and weaknesses of your organization for each of the quality practices. For example, a strength of external customer focus might be that everyone tries to meet with their external customers to define requirements, and a weakness might be that customer complaints are frequently not responded to promptly.

QUALITY PRACTICES	STRENGTHS (What we do well)	WEAKNESSES (What we need to improve)
1A. INTERNAL CUSTOMER FOCUSED		
1 B. EXTERNAL CUSTOMER FOCUSED		
2. CONTINUOUS IMPROVEMENT		
3. EMPLOYEE INVOLVEMENT		

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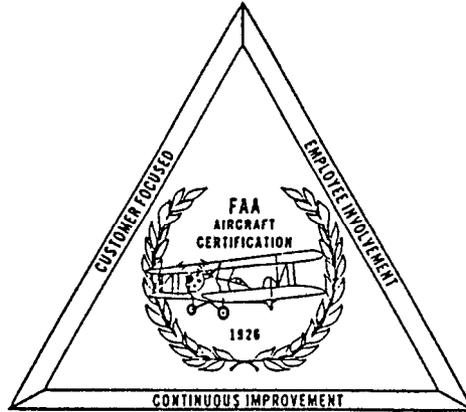
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UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

Slide C-1

Identifying Potential Improvement Projects

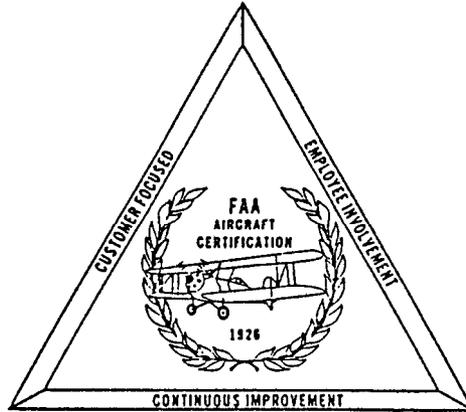


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UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

Slide C-1

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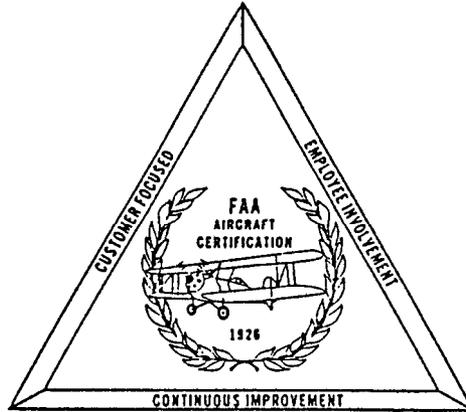


Notes

UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

Slide C-1

Identifying Potential Improvement Projects



Notes

Slide **C-4**

Multivoting: Prioritizing

- A Technique for Narrowing Down a List of Items the Group Has Brainstormed
- Quantifies Preferences of Group Members

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UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

Slide C-6

Problem Statement

- A Thorough Description of the Problem
- Provides a Starting Point for an Improvement Project

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UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

ACTIVITY C-I. IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

Step 2. Prioritize The List of Problems Technique: Multivoting

Instructions

Allow yourself **15** minutes for this step.

1. Start with the problems you brainstormed. Make sure they are clear to everyone.
2. Each person assigns **10** points to 1 or more of the problems. Some options can get a 0 AND you can give all of your votes to a single problem or split them up among several.
3. Call out your votes and post the votes on the flipchart.
4. Tally the votes for each problem.
5. Circle the top three to four potential problems with the most votes. Those are the ones you'll work with.
6. Go to Step 3 when you are finished.

UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

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UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

ACTIVITY C-I. IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

Step 3. Reaching Consensus On One Problem

Technique: Selection Grid

(Continued)

Example

A quality action team from the XYZ Company met to decide what problem to work on. The team, which had five people, was deciding among three problems: **(1)** high employee turnover, **(2)** office overcrowding, and **(3)** too much overtime.

Each member of the team voted once on each of the criteria the team decided on: whether the problem is worth solving, whether finding the solution to the problem had management support, whether it is appropriate for the team to solve, and whether the group's interest in the problem is high or low.

When they finished their selection grid, it looked like this:

Problem	Worthwhile?	Management Support?	In Our Control?	Group Interest?
High employee turnover	Yes: 4 No: 1	Yes: 4 No: 1	Yes: 1 No: 4	High: 5 Low: 0
Office overcrowding	Yes: 5 No: 0	Yes: 3 No: 2	Yes: 2 No: 3	High: 4 Low: 1
Too much overtime	Yes: 2 No: 3	Yes: 2 No: 3	Yes: 1 No: 4	High: 3 Low: 2

UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

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Too much overtime	Yes: 2 No: 3	Yes: 2 No: 3	Yes: 1 No: 4	High: 3 Low: 2

UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

ACTIVITY C-I. IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

Step 4. Describe The Problem **Technique: Problem Statement** (Continued)

Example

Sample Problem Statement: Littering

How It Is Now

- ⚡ Lakefront covered with litter
- ⚡ Town says no to keeping lakefront clean

Impact

- ⚡ Property values down
- ⚡ Tourism down
- ⚡ Fewer kids play at lakefront

How We'd Like It To Be

- ⚡ Lakefront free of litter and stays that way

Benefits

- ⚡ Civic pride
- ⚡ Higher real estate values
- ⚡ More desirable place for children to play

UNIT C: IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

ACTIVITY C-I. IDENTIFYING POTENTIAL IMPROVEMENT PROJECTS

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Slide C-8⁴

Group Discussion

Present:

- Problem Selected
- Problem Statement

Notes

Slide C-8⁴

Group Discussion

Present:

- Problem Selected
- Problem Statement

Notes

Slide C-8⁴

Group Discussion

Present:

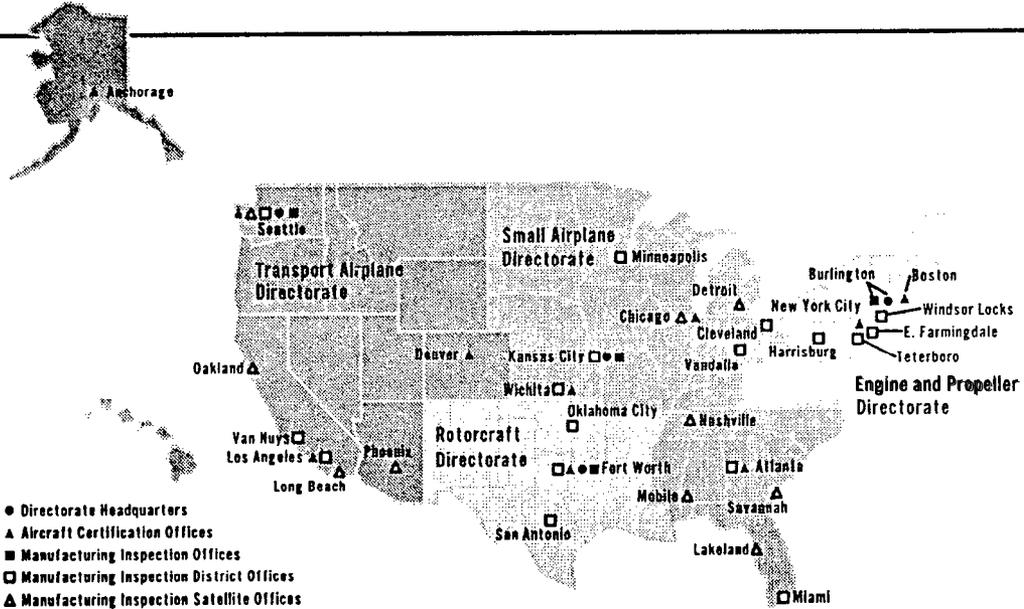
- Problem Selected
- Problem Statement

Notes

UNIT D: AIR PLAN FOR IMPLEMENTING TQM

Slide D-2

Aircraft Certification Service Directorates and Field Offices

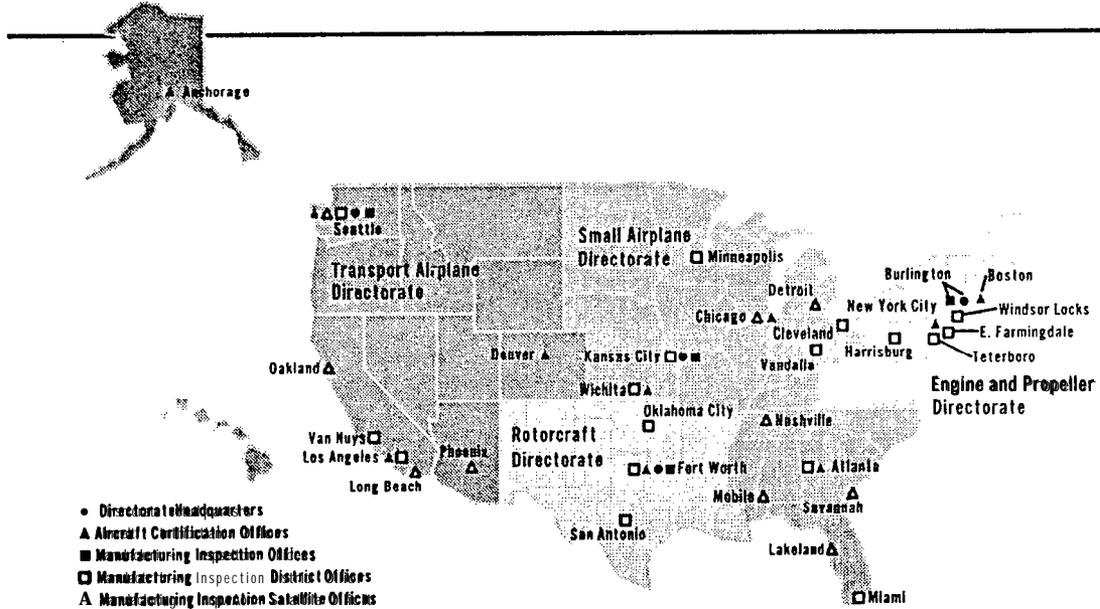


Notes

UNIT D: AIR PLAN FOR IMPLEMENTING TQM

Slide D-2

Aircraft Certification Service Directorates and Field Offices



Notes

UNIT D: AIR PLAN FOR IMPLEMENTING TQM

Slide D-4

Aircraft Certification Service Organizational Data

• Headquarters Divisions	5*
• Directorates	4
• Aircraft Certification Offices	10
• Manufacturing Inspection District Offices	26
• Staffing Level (FY -90)	815
- Managers	145
- Engineers	306
- Flight Test Pilots	28
- ASIs (Manufacturing)	130
- Support Personnel (e.g., Analysts, Clerical, Administrative, etc.)	206
• Annual Budget (FY -91)	\$56.8M

*Includes Aircraft **Certification** Division in Europe

Notes

UNIT D: AIR PLAN FOR IMPLEMENTING TQM

Slide D-4

Aircraft Certification Service Organizational Data

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• Directorates	4
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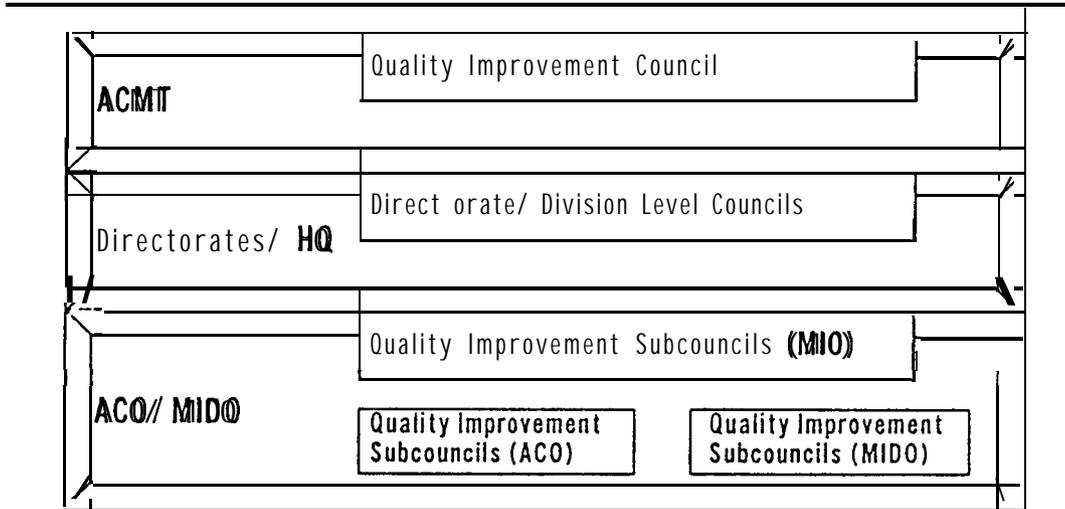
*Includes Aircraft **Certification** Division in Europe

Notes

UNIT D: AIR PLAN FOR IMPLEMENTING TQM

Slide **D-6**

TQM Councils

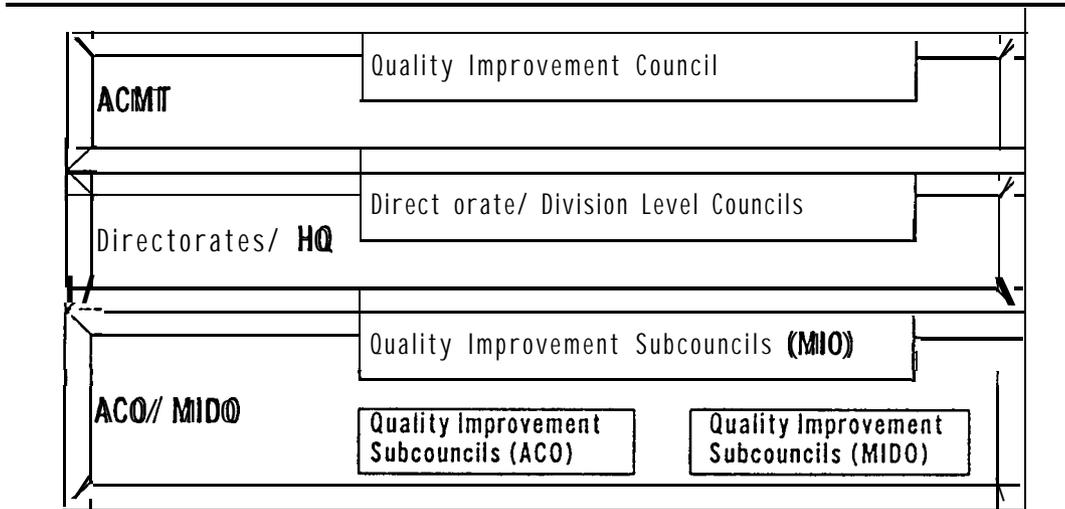


Notes

UNIT D: AIR PLAN FOR IMPLEMENTING TQM

Slide **D-6**

TQM Councils

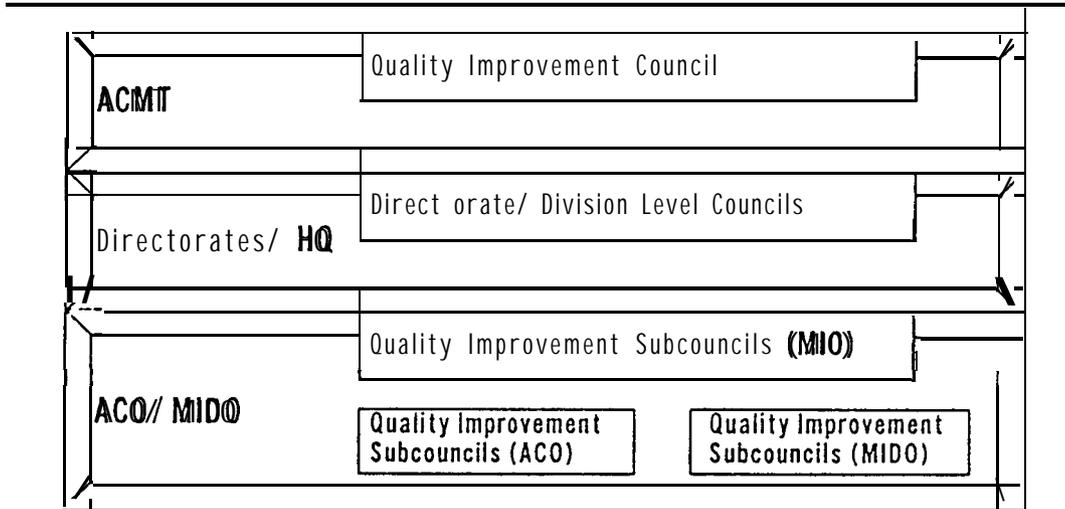


Notes

UNIT D: AIR PLAN FOR IMPLEMENTING TQM

Slide **D-6**

TQM Councils



Notes

Slide D-9

TQM Master Plan: Phase Two

- Revise Award System
- Implement **TQM** Training
- Initiate Refinement of Our Planning Process
- Train Additional **PIAT** Teams
- Establish **ACMT** Performance Standards
- Incorporate **TQM** Principles into Our Everyday Way of Doing Business

Notes

Slide D-9

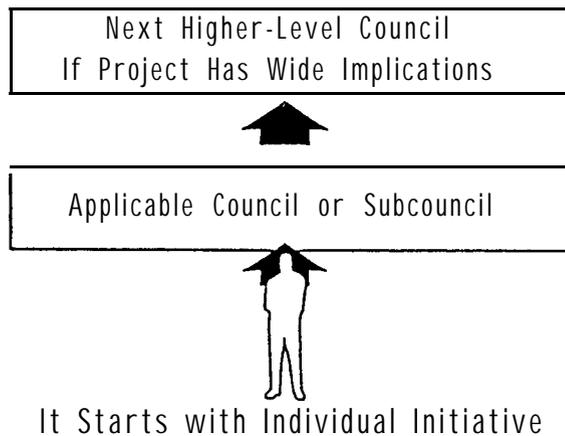
TQM Master Plan: Phase Two

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Notes

Slide D-i 1

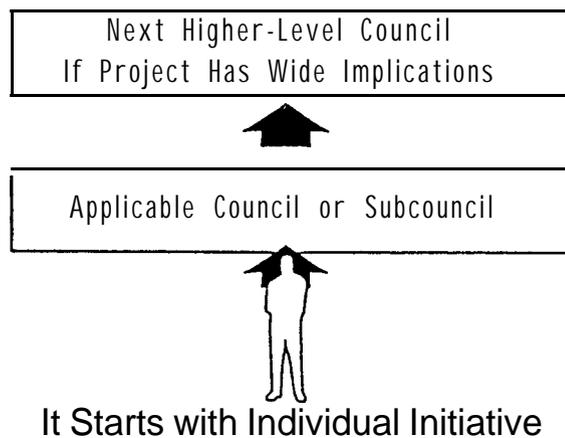
Nomination and Selection of Process Improvement Projects



Notes

Slide D-i 1

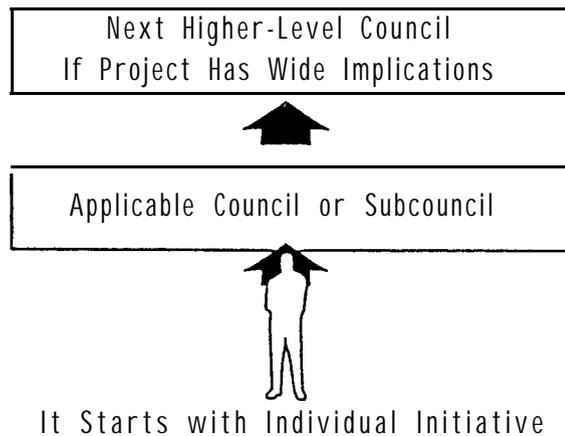
Nomination and Selection of Process Improvement Projects



Notes

Slide D-i 1

Nomination and Selection of Process Improvement Projects



Notes

Slide E-2

Getting Started Questions

- Am I Focusing on My Customers?
- Am I Striving for Continuous Improvement?
- Am I an Involved Employee?

Notes

Slide E-2

Getting Started Questions

- Am I Focusing on My Customers?
- Am I Striving for Continuous Improvement?
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Notes

UNIT E: TQM AND YOU - GETTING STARTED

ACTIVITY E-I. GETTING STARTED WITH TQM

Part 2. Instructions

Now that you've rated your performance in terms of the three Aircraft Certification quality practices, in the appropriate spaces below, identify some strengths and weaknesses of your performance that may have influenced your ratings. For example, a strength of continuous improvement might be that you try to fix a problem when you first come across it and a weakness might be that you only solve a problem if your manager makes it a requirement.

QUALITY PRACTICES	STRENGTHS (What I do well)	WEAKNESSES (What I need to improve)
1. CUSTOMER FOCUSED		
2. CONTINUOUS IMPROVEMENT		
3. EMPLOYEE INVOLVEMENT		

UNIT E: TQM AND YOU - GETTING STARTED

ACTIVITY E-I. GETTING STARTED WITH TQM

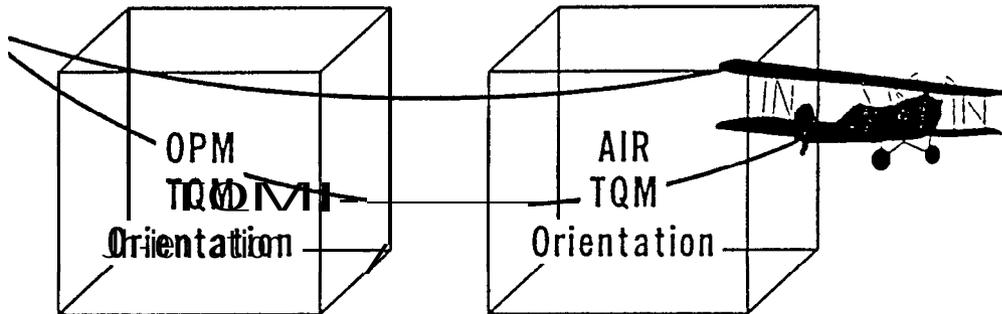
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Slide E-3

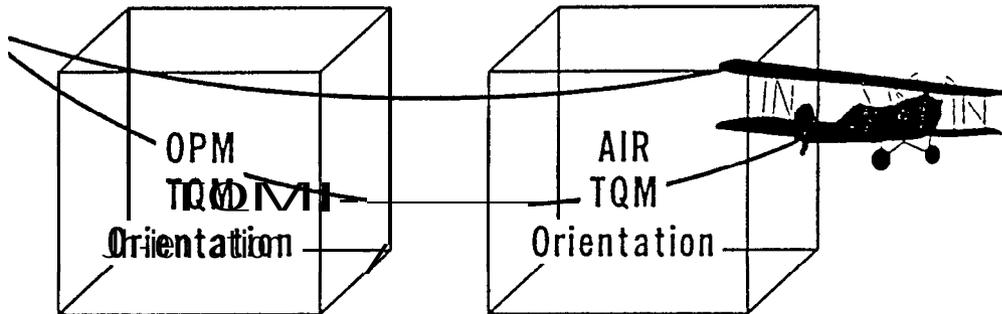
Summary



Notes

Slide E-3

Summary



Notes

AIR TQM ORIENTATION EVALUATION (Continued)

B. OVERALL ASSESSMENT

1. Overall, how would you rate this orientation training? (Circle your rating)

EXCELLENT
4

GOOD
3

FAIR
2

POOR
1

2. What was of **most** value to you in this orientation training? _____

3. What was of **least** value to you in this orientation training? _____

C. TRAINING DELIVERY

Please answer the following questions about the **overall** delivery of the orientation training.

1. Was sufficient opportunity given for . . .

• Asking questions?

Yes

No

• Group interaction/discussion?

Yes

No

• Individual work?

Yes

No

2. Was the overall pace of the training . . .

Too slow?

Too fast?

Just right?

**AIR TQM ORIENTATION
EVALUATION (Continued)**

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1. Overall, how would you rate this orientation training? (Circle your rating)

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APPENDIX 1

SUGGESTED READINGS AND RESOURCES FOR TQM

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SUGGESTED READING - BOOKS

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~~Albrecht~~, Karl, and ~~Zemke~~, Ron. Service America: Doing Business in the New Economy. Homewood, IL: Dow Jones-Irwin, 1985.

~~Bain~~, David, The Productivity Prescription: The Manager's Guide to Improving Productivity and Profits, New York, NY: McGraw Hill, 1982.

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APPENDIX 2

AIRCRAFT CERTIFICATION REGULATORY PROGRAM PUBLIC SERVICE AREAS

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AIRCRAFT CERTIFICATION REGULATORY PROGRAM PUBLIC SERVICE AREAS

Aircraft Certification Regulatory Program Public Service Areas

- Regulatory Policy Development
- Certification
- Continued Operational Safety

Regulatory Policy Development

Description: The Development of Regulations, Standards, Policies, Directives, and Guidance Material

Products:

- Procedural Regulations
- Airworthiness and Environmental Standards
- Technical Standard Orders (**TSO**)
- Advisory Circulars
- Internal FAA Directives, e.g., Handbooks, Orders, and Notices
- Efforts to Maintain Maximum Practicable Commonality in International Aircraft Certification Standards (e.g., FAR/JAR Cooperative Efforts)
- Bilateral Airworthiness Agreements Negotiated With Other Countries
- Special Arrangements Negotiated With the Airworthiness Authorities of Other Countries to Deal with International Joint Ventures and Co-production Situations Between U.S. Manufacturers and Their Out-of-Country Partners
- Written Opinions, Guidance Letters, etc.

AIRCRAFT CERTIFICATION REGULATORY PROGRAM PUBLIC SERVICE AREAS

Aircraft Certification Regulatory Program Public Service Areas

- Regulatory Policy Development
- Certification
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Regulatory Policy Development

Description: The Development of Regulations, Standards, Policies, Directives, and Guidance Material

Products:

- Procedural Regulations
- Airworthiness and Environmental Standards
- Technical Standard Orders (**TSO**)
- Advisory Circulars
- Internal FAA Directives, e.g., Handbooks, Orders, and Notices
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Certification

Description: Examination of Civil Aeronautical Products, Their Designs, the Production Quality Assurance Systems Under Which They Are Produced, and Private Persons Authorized to Represent the Administrator in Aircraft Certification Functions To Determine Compliance With the Applicable Safety and Qualification Requirements

Products:

- . Design Approvals:
 - Type Certificates **(TC)**
 - Type Certificate Amendments **(TCA)**
 - Supplemental Type Certificates **(STC)**
Design Alteration "Field Approvals"
 - Design Approvals Leading to Technical Standard Order **(TSO)**
Authorizations
 - Design Approvals Leading to Parts Manufacturer Approval **(PMA)**
- . Production Quality Assurance System Approvals:
 - Production Certificates (PC)
 - PC Production Limitation Record (PC **PLR**) Amendments
 - Approved Production Inspection System **(APIS)** Letters
 - **TSO** Authorizations **(TSOA)** - Quality Assurance System Approvals
 - Parts Manufacturer Approvals **(PMA)** - Quality Assurance System Approvals
- . Airworthiness Certification/Approval of Aircraft, Aircraft Engines, Propellers, Materials, Parts, and Appliances:
 - Standard Airworthiness Certificates on Complete Aircraft
 - Special Airworthiness Certificates on Complete Aircraft
 - + Restricted Category
 - + Limited Category
 - + Experimental Category
 - + Ferry Permits
 - Special Flight Authorizations for Aircraft Registered in Other Countries
 - Export Airworthiness Certificates
 - Conformity and Condition Inspections of Prototype Articles for Design Approval Testing
- . Appointment or Approval of Representatives of the Administrator:
 - Delegation Option Authorizations **(DOA)**
 - Designated Alteration Station **(DAS)** Authorizations
 - **SFAR 36** Repair Data Approval Authorizations
 - Designated Airworthiness Representative (DAR) Delegations
 - Designated Engineering Representative **(DER)** Delegations
 - Designated Manufacturing Inspection Representative **(DMIR)** Delegations

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 - Designated Engineering Representative **(DER)** Delegations
 - Designated Manufacturing Inspection Representative **(DMIR)** Delegations

- + Serves as a liaison with regionally-organized Quality Improvement Councils, where they exist.
- + Functions as a Process Oversight Council.
- + Provides support for activities of subordinate councils operating within the Directorate/Division.

0 Subcouncils (SC's) and Committees:

Membership.

- + Each **ACO** manager may establish his own Subcouncil (SC). If an SC is formed at the **ACO** level, it is chaired by the **ACO** manager and the council members may be branch managers, projects managers, or other appropriate members of the organization as determined by the manager.
- + Likewise each **MIO** manager may establish an SC with **MIDO/MISO** managers as the council members. Such an SC is chaired by the **MIO** manager.
- + Finally, **MIDO** managers and branch/section managers throughout the international AIR organization may establish their own SC's with whatever membership they deem appropriate.

Functions. The functions of the subcouncils parallel those of the **DLC's** within their respective jurisdictions and at their respective organizational levels.

PHASE-IN CHRONOLOGY.

- 0 Phase 1. This phase involves the initial establishment of **TQM** within AIR. It formalizes the organization's commitment to **TQM** and focuses on management structures and training for upper management.

Formulate and publish an AIR **TQM** Vision statement.

Revise the **ACMT** mission and functional statements to reflect commitment to **TQM** philosophy.

Publish first edition of AIR **TQM** Master Plan

- + Serves as a liaison with regionally-organized Quality Improvement Councils, where they exist.
- + Functions as a Process Oversight Council.
- + Provides support for activities of subordinate councils operating within the Directorate/Division.

0 Subcouncils (SC's) and Committees:

Membership.

- + Each **ACO** manager may establish his own Subcouncil (SC). If an SC is formed at the **ACO** level, it is chaired by the **ACO** manager and the council members may be branch managers, projects managers, or other appropriate members of the organization as determined by the manager.
- + Likewise each **MIO** manager may establish an SC with **MIDO/MISO** managers as the council members. Such an SC is chaired by the **MIO** manager.
- + Finally, **MIDO** managers and branch/section managers throughout the international AIR organization may establish their own SC's with whatever membership they deem appropriate.

Functions. The functions of the subcouncils parallel those of the **DLC's** within their respective jurisdictions and at their respective organizational levels.

PHASE-IN CHRONOLOGY.

- 0 Phase 1. This phase involves the initial establishment of **TQM** within AIR. It formalizes the organization's commitment to **TQM** and focuses on management structures and training for upper management.

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Revise the **ACMT** mission and functional statements to reflect commitment to **TQM** philosophy.

Publish first edition of AIR **TQM** Master Plan

Announce, by personal presentation of the Director at each directorate, the adoption of the **TQM** philosophy by the AIR.

Obtain contractor services to train at least one **PIAT**.

Complete a first project.

Publicize the initiative by: inviting non-AIR managers to participate in our training courses; ~~re-designing~~ the AIR logo to include the **TQM** symbol; submitting articles to Intercom, etc.

Purchase and distribute initial supplies of texts, videotapes and other learning aids throughout the AIR.

- 0 Phase 2. This phase represents a further refinement of phase 1 steps, reflecting a transition from the initial adoption of **TQM** to the incorporation of **TQM** concepts into our way of doing business.

Rewards & Recognition System. Review present rewards and recognition system and restructure to reflect AIR's commitment to **TQM** approaches to organizational performance improvement.

Training.

- + Study performance of contractors providing training with view to contracting with only one vendor for specific kinds of training (e.g., **PIAT** training).
- + Establish a contracting/funding mechanism for training and consulting services.
- + Provide the AIR workforce with **TQM** awareness training.
- + Train a portion of the workforce in **TQM** quality improvement processes.

Planning Process. Refine our planning processes.

New Way of Doing Business. Incorporate **TQM** principles into our ~~mindset~~ for planning and accomplishing our everyday work.

- + Begin organizational analysis to determine and agree upon: mission, customer identification, products and services.
- + Integrate **TQM** considerations into the Evaluation Program.

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- + Begin, on an individual office level, to initiate projects and/or customize approaches to technical and managerial projects so that a **TQM** orientation is apparent and real.
- + Review, and revise as appropriate, performance standards to reflect a **TQM** focus.
- + Review the organizational structure to facilitate empowerment of employees.
- + **PIAT,, PIAT,, PIAT!!!!**

0 Phase 3 (Maintenance Phase).

Continue training.

Continue planning.

Revise program documents (glossary, Master Plan, customer identification lists, etc.) as required.

Continue improvements in work programs.

Support employee-initiated efforts directed toward continuous improvement.

Share **TQM** experiences with interested FAA and non-FAA elements,

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CHAPTER 2

GUIDELINES ON NOMINATION AND SELECTION OF PROCESS IMPROVEMENT ACTION TEAM (PIAT) PROJECTS

GENERAL - The procedures, criteria, etc., contained in this chapter apply to all projects that are nominated to any quality council within the Aircraft Certification Service. The membership and functions of the various councils are set forth in Chapter 1.

WHO IS ELIGIBLE TO SUBMIT A NOMINATION - Any employee or customer (FAA or otherwise) involved in any process in which AIR is involved, is eligible to nominate a project.

WHAT CONSTITUTES A NOMINATION - Nominations may be submitted on a Proposal for a Process Improvement Action Team Project form, shown on the last page of this chapter. Alternatively, a nomination may be submitted on plain bond. Regardless of whether the nomination is submitted on the form or on plain bond, it must include the following items of information:

- 0 Name, routing symbol (or office name) and telephone number of submitter.
- 0 Short description of the problematic process. The description should be in terms of either failure of the process to meet customer needs or failure of the process to meet customer needs efficiently.
- 0 Proposed team charter. The charter may address only one or limited subparts of the problematic process or it may address the process in its entirety. It will describe what the team will do and define the scope of its actions.
- 0 Proposed team leader/membership list by function, e.g., "Recommend the leader be an engineer from the Policy & Procedures Branch in ~~AIR-100~~, and that the team be composed of both Aircraft Certification Office (ACO) engineers with substantial Project Manager experience and Directorate engineers with Project Officer experience on at least 2 type certification projects."
- 0 Identification of the types of data to be used as baseline data from which to measure process improvements. An example of one kind of base line data could be: the average time between preparation of an SF-52 by the secretary and receipt of the SF-52 in the personnel office for all SF-52's prepared by the secretary during the month of February, 1991.

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NOMINATION PROCESS -

- 0 Individual AIR employees may nominate projects at any time to their respective Councils.
- 0 External (to AIR) individuals or organizations may nominate projects at any time to any AIR Council.
- 0 If the implications of a project nominated to any AIR Council, extend beyond the entity's jurisdiction (i.e., involve either a process which is largely out of the entity's control to fix or a process which has service-wide impacts), the project will be submitted by that entity to the next higher level entity or directly to the Quality Improvement Council **(QIC)**.
- 0 When the determination is made that a project extends beyond the entity's jurisdiction, it will be sent to the next higher council or directly to the **QIC** without evaluation of its merit.

FEEDBACK TO NOMINATOR - The chairman of the council to whom the nomination is submitted, is responsible for keeping the nominator informed on the status of his nomination at periodic intervals not exceeding 2 weeks in length.

CRITERIA FOR SELECTING PROJECTS - Councils shall use the following criteria in selecting **PIAT** projects to be accomplished within their respective jurisdictions. Selected projects must:

- 0 Address a chronic problem,
- 0 Be feasibly completed within no more than several months,
- 0 Concern processes commonly acknowledged as important, and
- 0 Yield tangible measurable results.

POST-SELECTION PROCEDURES -

- 0 After the Council has approved a nomination, it will:
 - Designate whichever of its members is the most affected by the process to be studied, as the liaison between the Council and the team.

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CHAPTER 4
AIRCRAFT CERTIFICATION AWARD
FOR EXCELLENCE IN CONTINUOUS IMPROVEMENT

RESERVED



U.S. Department
of Transportation
**Federal Aviation
Administration**

Total Quality Management

*Federal Aviation Administration
Aircraft Certification Service*

Participant Book